

REMARKS

In an Office Action mailed on January 11, 2005, the Examiner: (1) rejected claims 9-11 and 21-22 under 35 U.S.C. § 102(e) as anticipated by U.S. Pat. No. 6,300,679 to Mukerji, et al. ("Mukerji"); (2) rejected claims 1-4, 12, 16-18, and 23-24 under 35 U.S.C. § 103(a) as obvious over Mukerji in view of U.S. Pat. No. 5,776,797 to Nicewarner, Jr., et al. ("Nicewarner"); (3) rejected claims 5-8, 13-15, 20 and 24 under 35 U.S.C. § 103(a) as obvious over Mukerji in view of Nicewarner and further in view of U.S. Pat. App. Publication No. 2003/0016710 to Komoto ("Komoto"); and (4) rejected claim 19 under 35 U.S.C. § 103(a) as obvious over Mukerji in view of Nicewarner and further in view of U.S. Pat. No. 6,803,651 to Chiang ("Chiang"). Further, the Examiner has provisionally rejected claims 1-6, 9-14, 16-18, 20, 22-25 under the judicially created doctrine of obviousness-type double patenting over claims 21-26, 27, and 29-31 of U.S. Pat. App. No. 10/836,855.

Concerning the double patenting rejection, Applicants respectfully provide herewith a terminal disclaimer in compliance with 37 C.F.R. § 1.321. Applicants respectfully submit that the filing of terminal disclaimer overcomes the double patenting rejection of claims 1-6, 9-14, 16-18, 20, 22-25. Applicants further reserve the right to withdraw the terminal disclaimer in case the provisional rejection of these claims is not made final.

Also, by this Amendment, Applicants respectfully seek allowance of pending claims 1-25 for at least the reasons given below:

(1) Rejection of Claims 9-11 and 21-22 Under 35 U.S.C. § 102(e)

The Examiner rejected Claims 9-11 and 21-22 under 35 U.S.C. § 102(e) as anticipated by Mukerji. Applicants respectfully traverse the rejection of claims 9-11 at least because Mukerji does not teach a "first form standard associated with [a] first CSP" and "a second form standard

associated with [a] second CSP.” The Examiner has rejected these claims based on certain characterization of the teachings of Mukerji.

Applicants respectfully disagree with the Examiner’s characterization of the teachings of Mukerji. In particular, the Examiner states that Fig. 5 of Mukerji discloses the subject matter recited in claims 9-11. (February 11, 2005 Office Action, page 2, paragraph 2). Specifically, the Examiner characterizes mask 512 of Fig. 5 as a first form standard and the other side of the mask (not shown in Fig. 5 as acknowledged by the Examiner) as the second form standard. Mask 512 is described in Mukerji with respect to Fig. 5 and Fig. 3 (Mukerji, col. 4, ll. 54-67). Mukerji notes that mask 512 “can be similar” to mask 310 of Fig. 3. (Id., col. 4, ll. 59-64). Fig. 3 and related description of mask 310 provide, “[m]ask 310 prevents trace 125 from directly contacting chip 341 in order to ensure that trace 125 does not improperly electrically bias device 301.” (Id., col. 4, ll. 19-22). That portion of Mukerji further notes that, “[m]ask 310 can be comprised of conventional masking materials and is preferably disposed onto trace 125 before the bending or folding of substrate 120.” (Id., col. 4, ll. 22-24). Thus, unlike the Examiner’s characterization of teachings of Mukerji, Mukerji merely teaches the use of a mask to prevent trace 125 from directly contacting with chip 341.

In contrast, claims 9-11 recite a “first form standard associated with [a] first CSP” and “a second form standard associated with [a] second CSP.” Consistent with embodiments of claims 9-11, a form standard may be a “mandrel that may mitigate thermal accumulation while providing a standard sized form about which flex circuiting is disposed.” Applicants respectfully submit that Mukerji does not teach the recited subject matter of claims 9-11 because it fails to teach a “first form standard associated with [a] first CSP” and “a second form standard

associated with [a] second CSP.” Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claims 9-11 under 35 U.S.C. § 102(e).

Concerning the rejection of claims 21-22 under 35 U.S.C. § 102(e), Applicants respectfully submit that for at least similar reasons as given above with respect to claims 9-11, Mukerji does not teach, “a form standard attached to [a] CSP” and a “flex circuitry attached to the form standard.” Accordingly, Applicants request the Examiner to withdraw both the rejection of claims 9-11 and the rejection of claims 21-22 for at least the reasons given above.

(2) Rejection of Claims 1-4, 12, 16-18, and 23-24 Under 35 U.S.C. § 103(a)

With respect to the rejection of claims 1-4, 12, 16-18, and 23-24 under 35 U.S.C. § 103(a) as obvious over Mukerji in view Nicewarner, Applicants respectfully submit that the rejection be withdrawn because the Office Action does not set forth a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure. MPEP § 2143; In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants respectfully submit that there is no *prima facie* case of obviousness because one of ordinary skill in the art would not have had any motivation or suggestion to combine the two references in the manner suggested by the Examiner. This is because, as discussed above with respect to claims 9-11, Mukerji does not teach what the Office Action sets forth as its

teachings. In particular, Mukerji teaches the use of a mask to prevent trace 125 from directly contacting with chip 341. According to Mukerji, this ensures that “trace 125 does not improperly electrically bias device 301.” Mukerji, however, does not teach or suggest a “first form standard disposed, in substantial part, above [a] first CSP” and a “flex circuitry connecting the first and second CSPs and positioned to be in part, beneath the first CSP and, in part, above the first form standard and beneath the second CSP,” as recited in claims 1-4. Thus, a person of ordinary skill in the art would not be motivated to combine Mukerji with Nicewarner in the manner proposed by the Examiner.

Moreover, Nicewarner does not cure the deficiencies of the teachings of Mukerji. In particular, Nicewarner does not teach or suggest a “first form standard disposed, in substantial part, above [a] first CSP” and a “flex circuitry connecting the first and second CSPs and positioned to be, in part, beneath the first CSP, and, in part, above the first form standard and beneath the second CSP,” as recited in claims 1-4. Thus, even if combined with Mukerji (which it cannot be), Nicewarner does not teach or suggest the subject matter recited in claims 1-4. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claims 1-4 for at least these reasons.

Regarding the rejection of claims 12, 16, and 17 under 35 U.S.C. § 103(a) over Mukerji in view of Nicewarner, Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

As explained above with respect to claim 9 from which claims 12, 16, and 17 depend, Mukerji does not teach or suggest, a “first form standard associated with [a] first CSP” and “a second form standard associated with [a] second CSP.” Further, as explained above with respect to claims 1-4, Nicewarner does not cure the above-noted deficiencies of Mukerji. Thus, even if

combined, which they cannot be for similar reasons as given above with respect to claims 1-4, Mukerji and Nicewarner do not teach a “first form standard associated with [a] first CSP” and “a second form standard associated with [a] second CSP,” as recited in claims 12, 16, and 17. Thus claims 12, 16, and 17 are patentable for at least these reasons.

Concerning the rejection of claim 18 under 35 U.S.C. § 103(a) over Mukerji in view of Nicewarner, Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

For similar reasons as given above with respect to claim 9, Mukerji does not teach or suggest a method for creating a high-density module comprising, among other steps, providing a form standard, “providing first and second CSPs, attaching the form standard to the first CSP, and applying a first metallic material to at least one part of the first form standard.” Moreover, for similar reasons as given above with respect to claim 9, Nicewarner does not cure the above-noted deficiencies of Mukerji. Thus, even if combined, which they cannot be for similar reasons as given above with respect to claims 1-4, Mukerji and Nicewarner do not teach a “first form standard associated with [a] first CSP” and “a second form standard associated with [a] second CSP,” as recited in claims 12, 16, and 17. Thus claims 12, 16, and 17 are patentable for at least these reasons.

(3) Rejection of Claims 5-8, 13-15, 20, and 24 Under 35 U.S.C. § 103(a)

With respect to the rejection of claims 5-8, 13-15, 20, and 24 under 35 U.S.C. § 103(a) as obvious over Mukerji in view of Nicewarner and further in view Komoto, Applicants respectfully submit that the rejection be withdrawn because the Office Action does not set forth a *prima facie* case of obviousness for at least the following reasons.

Claims 5-8 depend directly or indirectly from claim 1. As explained above with respect to claims 1-4, Mukerji cannot be properly combined with Nicewarner. Moreover, even if combined, (which they cannot be), the purported combination does not teach or suggest a “first form standard disposed, in substantial part, above [a] first CSP” and a “flex circuitry connecting the first and second CSPs and positioned to be in part, beneath the first CSP and, in part, above the first form standard and beneath the second CSP,” as recited in claim 1 from which claims 5-8 depend. Further, Komoto also cannot be properly combined with Mukerji and Nicewarner. Indeed, the Examiner has not established a *prima facie* case of obviousness because one of ordinary skill in the art would not have had any motivation or suggestion to combine Komoto with Mukerji and Nicewarner in the manner proposed by the Examiner.

This is because Komoto does not cure the deficiencies of teachings of Mukerji and Nicewarner, taken alone or in combination. In particular, Komoto does not teach or suggest a “first form standard disposed, in substantial part, above [a] first CSP” and a “flex circuitry connecting the first and second CSPs and positioned to be in part, beneath the first CSP and, in part, above the first form standard and beneath the second CSP.” Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claims 5-8 under 35 U.S.C. § 103(a) based on the combination of Mukerji, Nicewarner, and Komoto.

Claims 13-15 depend directly or indirectly from claim 12 and thus are patentable for at least the reasons given above with respect to the rejection of claims 9-11. Further, as explained above with respect to claims 5-8, Komoto cannot be properly combined with Mukerji and Nicewarner. Moreover, even if Mukerji and Nicewarner are combined (which they cannot be), the combination does not teach or suggest “[a] high-density circuit module comprising a first CSP; a second CSP stacked above the first CSP; a first form standard associated with the first

CSP; and a second form standard associated with the second CSP.” Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claims 13-15 under 35 U.S.C. §103(a).

Concerning claim 20, which depends from claim 18, Applicants respectfully request the Examiner to withdraw the rejection for at least the reasons given above with respect to claim 18. Moreover, as explained above, with respect to claims 5-8, Komoto cannot be properly combined with Mukerji and Nicewarner. This is because Komoto does not cure the deficiencies of teachings of Mukerji and Nicewarner, taken alone or in combination. In particular Komoto does not teach or suggest a method for creating a high-density module comprising, among other steps, providing a form standard, “providing first and second CSPs, attaching the form standard to the first CSP, and applying a first metallic material to at least one part of the first form standard.” Accordingly, at least for these reasons, Applicant’s respectfully request the Examiner to withdraw the rejection of claim 18 under 35 U.S.C. §103(a).

Finally, regarding the rejection of claim 24, which depends from claim 21, Applicants respectfully request the Examiner to withdraw the rejection for at least the reasons given above with respect to claim 21. In sum, Applicants respectfully request the Examiner to withdraw the rejection of claims 5-8, 13-15, 20, and 24 under 35 U.S.C. § 103(a) based on the combination of Mukerji, Nicewarner, and Komoto, for at least the reasons given above.

(4) Rejection of Claim 19 Under 35 U.S.C. § 103(a)

With respect to the rejection of claim 19 under 35 U.S.C. § 103(a) as obvious over Mukerji in view of Nicewarner and further in view Chiang, Applicants respectfully submit that the rejection be withdrawn because the Office Action does not set forth a *prima facie* case of obviousness for at least the following reasons.

As explained above with respect to the rejection of claim 18 (from which claim 19 depends), Mukerji and Nicewarner cannot be properly combined since a person of ordinary skill in the art would not be motivated to do so. Further, even if combined, which they cannot be, Mukerji and Nicewarner do not teach or suggest a method for creating a high-density module comprising, among other steps, providing a form standard, “providing first and second CSPs, attaching the form standard to the first CSP, and applying a first metallic material to at least one part of the first form standard,” as recited in claim 18, from which claim 19 depends. Thus, for at least these reasons claim 19 is patentable over the cited references.

Moreover, Chiang cannot be properly combined with Mukerji and Nicewarner. This is because Chiang does not cure the deficiencies of teachings of Mukerji and Nicewarner, taken alone or in combination. In particular Chiang does not teach or suggest a method for creating a high-density module comprising, among other steps, providing a form standard, “providing first and second CSPs, attaching the form standard to the first CSP, and applying a first metallic material to at least one part of the first form standard.” Thus, at least for these reasons Applicants respectfully request the Examiner to withdraw the rejection of claim 19, as well.

In view of the reasons given above, Applicants respectfully request the reconsideration of the pending application, withdrawal of all of the claim rejections, and the timely allowance of the pending claims 1-25.

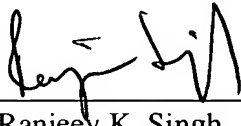
Further, the Office Action contains a number of statements reflecting characterizations of the claims and/or related description. Regardless of whether any such statements are addressed above, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

The Commissioner is hereby authorized to charge any excess claim fees to Deposit Account No. 50-0897. The Commissioner is hereby authorized to charge any fees deemed to be due or credit any overpayment to Deposit Account No. 50-0897, upon which the undersigned is authorized to sign.

Respectfully submitted,

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